

环柄菇属东亚一新记录种——锥鳞环柄菇*

梁俊峰^{1,2 **}

(1 中国科学院昆明植物研究所生物多样性与生物地理学重点实验室, 云南 昆明 650204;

2 中国科学院研究生院, 北京 100049)

摘要: 报道东亚环柄菇属的一个新记录种——锥鳞环柄菇 *Lepiota jacobi* Vellinga & Knudsen, 标本采自中国云南。该种的鉴别特征是菌盖密被灰色至暗褐色的锥状鳞片; 担孢子椭圆形, 腹部近平直, 极小; 囊状体缺如。

关键词: 锥鳞环柄菇; 新记录种; 东亚

中图分类号: Q 949

文献标识码: A

文章编号: 0253-2700 (2007) 06 - 617 - 02

Lepiota jacobi (Agaricaceae), a Species New to East Asia

LIANG Jun-Feng^{1,2 **}

(1 Key Laboratory of Biodiversity and Biogeography, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650204, China; 2 Graduate University of Chinese Academy of Sciences, Beijing 100049, China)

Abstract: *Lepiota jacobi* Vellinga & Knudsen, a species new to East Asia, is reported and illustrated. It is characterized by its small spores, the absence of cystidium, and the more or less acute spines on pileus made up of inflated cells in short chains.

Key words: *Lepiota jacobi*; New record; East Asia

Lepiota (Pers.: Fr.) S. F. Gray is one of the most common genera in Agaricaceae, Agaricales, basidiomycetes. Up date, nearly 70 species have been reported in East Asia (Bi *et al.* 1990, 1994; Chiu, 1948; Hongo, 1986; Imai, 1938, 1939; Ito, 1959; Li *et al.* 1993; Mao, 1998; Teng, 1936, 1939, 1996; Wang, 2004; Wang and Yang, 2005a, b; Yang, 1990; Yang *et al.* 2005; Yuan, 1995). *L. jacobi* Vellinga & Knudsen is reported and illustrated from East Asia for the first time herein. In the description, macro-morphology is based on the field notes and color slides of the material; micro-morphology is based on observation of the material under microscope. For microscopic studies, 5% KOH was used as mounting medium to rehydrate the tissue. For the size of the basidiospore, the apiculus is not included. The abbreviation n/m/p means n basidiospores measured from m basidiomata of p collections. The notation of the form b-c stands for the dimensions of the basidiospores. Q is used to mean "length/width ratio" of a basidiospore in side view; Q means average Q of all basidiospores \pm sample standard deviation.

Lepiota jacobi Vellinga & Knudsen, in Persoonia 14: 407. 1992.

Lepiota langei Knudsen in Bot. Tidsskr. 75: 130. 1980, non *Lepiota langei* Locq., in Bull. Soc. Linn. Lyon 14: 95. 1945.

Lepiota eriophora auto. non Peck in Bull. Torr. Bot. Club 30: 95, 1903.

Cystolepiota eriophora auto. non Knudsen in Bot. Tidsskr. 73: 127, 1978.

Echinoderma eriophorum auto. non M. Bon in Doc. Mycol. 21 (82): 63. 1991.

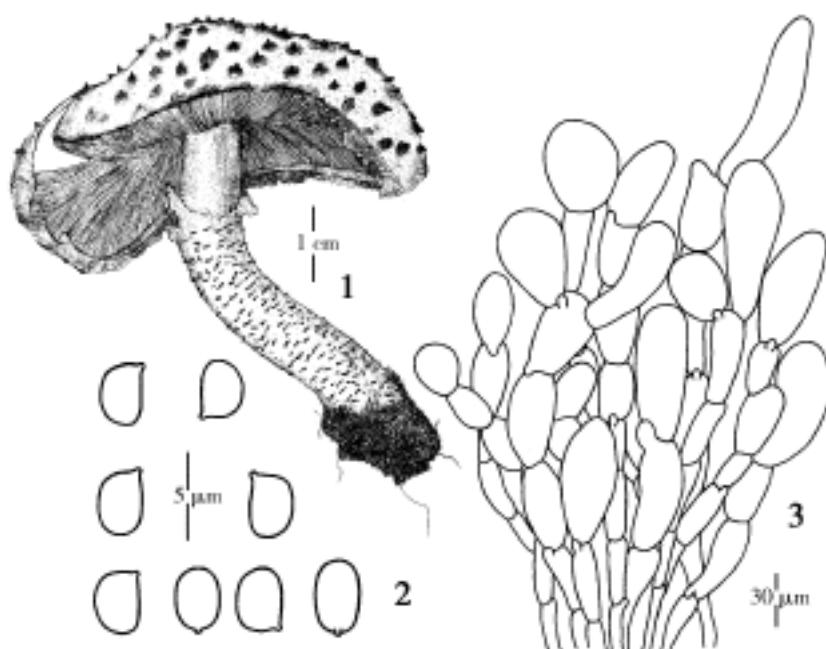
Basidioma (Fig. 1: 1) small-sized. Pileus 55 mm in diam., plano-convex with low, broad umbo, pale sordid brown, beige to whitish, covered with small discrete, grey to dark brown, acute spines up to 1 mm high and less 1 mm wide at the base, towards margin spines more or less concentrically arranged and slightly bigger and more adnate and fibrillose; margin of pileus undulating, with remnants of annulus. Lamellae free, crowded, whitish. Stipe 55 \times 9 mm, cylindrical, slightly broadened towards base, hollow, with superior annular zone, pale pinkish above annular zone, sometimes with orange-ting, fibrillose-flocculose, below annular zone with girdles and zones of woolly, brown squamules on paler background. Context whitish to white.

Basidiospores (Fig. 1: 2) [30/1/1] 3.0 - 4.5 \times 2.0 - 2.5 μ m, Q = 1.2 - 2.0, Q = 1.50 \pm 0.20, ellipsoid, mostly with parallel sides in side-view, the same or slightly ovoid in frontal

* Foundation item: Supported by the National Natural Science Foundation of China (30525002, 30270017 and 30499340).

Received date: 2007-02-05, Accepted date: 2007-04-13

** 现工作单位: 中国林业科学院热带林业研究所

Fig. 1 *Lepiota jacobi* (HKAS 48802)

1. Basidioma; 2. Basidiospores; 3. Structure of spines on pileus

view, dextrinoid, not metachromatic in Cresyl Blue, often in tetrads. Basidia $13-18 \times 4-5.5 \mu\text{m}$, narrowly clavate, sometimes cylindrical, 4-spored. Lamellae edge fertile. Cheilocystidium and Pleurocystidium absent. Spines on pileus (Fig. 1: 3) made up of more or less regular chains of inflated elements: terminal elements subglobose, pyriform, ellipsoid or subclavate, $21-81 \times 11-31 \mu\text{m}$, with brownish and thickened walls; intermediate elements somewhat inflated to cylindrical, $8-18 \mu\text{m}$ wide, with brown walls; basal elements cylindrical to slightly inflated, $4-10 \mu\text{m}$ wide, with brown, non-encrusted walls. Clamp connections present in all tissues.

Habitat & Distribution: Solitary on lawn. Rather rare, only found in southwestern China.

Specimen examined: China: Yunnan Province, Lijiang City, Yulong Snow Mountain, alt. 3100 m, 4 VIII 2005, J. F. Liang 186 (HKAS 48802).

Remarks: *Lepiota jacobi* is characterized by its umbonate pileus covered with grey to dark brown acute spines, small basidiospores and the absence of cystidium (Knudsen, 1978, 1980; Enderle and Kriegelsteiner, 1989; Vellinga, 2001). The name of the species was originally described as *Lepiota langei* by Knudsen (1980), but he overlooked *Lepiota langei* validly published by Locquin (1945). Thus, the new name, *Lepiota jacobi* Vellinga & Knudsen in honour of Jacob E. Lange, was proposed by Vellinga (1992).

Acknowledgements: The author thanks Dr. Zhu L. Yang, Kunming Institute of Botany, Chinese Academy of Sciences for reading and correcting the manuscript.

References:

Bi ZS, Zheng GY, Li TH, 1994. Macrofungus Flora of Guangdong Province [M]. Guangzhou: Guangdong Science and Technology Press, 465—472

Bi ZS, Zheng GY, Li TH *et al.*, 1990. Macrofungus Flora of the Mountainous District of North Guangdong [M]. Guangzhou: Guangdong Science and Technology Press, 238—241

Chiu WF, 1948. The Amanitaceae of Yunnan [J]. *Sci Rept Natl Tsing Hua Univ Ser B Bio Psychol Sci*, 3 (3): 165—178

Enderle M, Kriegelsteiner GJ, 1989. Die Gattung Lepiota S. F. Gray emend. Pat. in der Bundesrepublik Deutschland (Mitteleuropa) [J]. *Zeitschr Mykol*, 55: 43—104

Hongo T, 1986. On the Agaricaceae of Japan [J]. *Trans Mycol Soc Japan*, 27: 99—107

Imai S, 1938. Studies on the Agaricaceae of Hokkaido I [J]. *J Facul Agric Hokkaido Imp Univ Sapporo*, 43: 31—46

Imai S, 1939. *Studia Agaricacearum japonicarum* I [J]. *Bot Magaz*, 53: 392—399

Ito S, 1959. Mycological Flora of Japan. Vol. II. Basidiomycetes. No. 5. Agaricales, Gasteromycetales [M]. Tokyo: Yokendo Ltd, 264—269. (in Japanese).

Knudsen H, 1978. Notes on *Cystolepiota* Sing. and *Lepiota* S. F. Gray [J]. *Bot Tidsskr*, 73: 124—136

Knudsen H, 1980. A revision of *Lepiota* sect. *Echinatae* and *Amyloideae* (Agaricaceae) in Europe [J]. *Bot Tidsskr*, 75: 121—155

Li JZ, Hu XW, Peng YB, 1993. Macrofungus Flora of Hunan [M]. Changsha: Hunan Normal University Press, 210—215

Locquin M, 1945. Notes sur les Lepiotas II [J]. *Bull Soc Linn Lyon*, 14: 82—100

Mao XL, 1998. Economic Fungi of China [M]. Beijing: Science Press, 175—181

Teng SC, 1936. Additional fungi from China III [J]. *Sinensis*, 7 (5): 529—569

Teng SC, 1939. A Contribution to Our Knowledge of the Higher Fungi of China [M]. Peking: National Institute of Zoology & Botany, Academia Sinica

Teng SC, 1996. Fungi of China [A]. Korf RP ed, Mycotaxon [M]. Ithaca: Mycotaxon, Ltd, 453—456

Vellinga EC, 1992. Notulae ad floram Agaricinam Neerlandicam - XVI-II, Some notes on *Cystolepiota* and *Lepiota* [J]. *Persoonia*, 14 (4): 407—415

Vellinga EC, 2001. *Lepiota* (Pers.: Fr) S. F. Gray [A]. In: Noorderloos ME, Kuyper ThW, Vellinga EC. AA eds. *Flora Agaricina Neerlandica*, Vol. 5 [M]. Netherlands: Balkema Publishers, 109—151

Wang HC, 2004. *Lepiota cortinarius*, a species new to China [J]. *Mycosistema*, 23 (3): 439—440

Wang HC, Yang ZL, 2005a. Notes on *Lepiota shixingensis* and an allied new species (Basidiomycetes) [J]. *Nova Hedwigia*, 81 (3-4): 463—469

Wang HC, Yang ZL, 2005b. A new species of *Lepiota* (Agaricaceae, Basidiomycetes) from China [J]. *Mycotaxon*, 91: 51—54

Yang ZL, Ge ZW, Liang JF, 2005. Species diversity of lepiotoid fungi in China [C]. Proceedings of the 7th Mycological Symposium between Mainland China and Taiwan, 147—159

Yang ZL, 1990. Several noteworthy higher fungi from southern Yunnan, China [J]. *Mycotaxon*, 38: 407—416

Yuan MS, Sun PQ, 1995. Sichuan Mushroom [M]. Chengdu: Sichuan Science and Technology Press, 512—516